

ABSTRACT OF THE DISCLOSURE

A coating apparatus for applying a coating liquid to a printing substrate. The coating apparatus has a rotatable first roll and a rotatable second roll, each having a surface energy. The second roll is positioned adjacent to the first roll and defines with the first roll a first nip through which the printing substrate passes. A metering device is provided for applying a substantially uniform layer of coating liquid onto the second roll. The second roll in turn transfers the coating liquid to the printing substrate. The surface energy of the second roll is greater than the surface energy of the coating liquid. In one embodiment, the metering device includes a rotatable third roll and a doctor blade contacting the third roll, each having a surface energy. The surface energy of at least a portion of either or both the third roll and doctor blade is less than the surface energy of the coating liquid.